

1 1. A method comprising:
2 forming a non-switching ovonic material; and
3 forming a phase change material that changes
4 between more conductive and less conductive states coupled
5 to said non-switching ovonic material.

1 2. The method of claim 1 including forming said non-
2 switching ovonic material over said phase change material
3 and forming a second ovonic material under said phase
4 change material.

1 3. The method of claim 1 including contacting said
2 non-switching ovonic material with an electrode.

1 4. The method of claim 3 including forming a second
2 ovonic material over said phase change material, forming
3 said non-switching ovonic material under said phase change
4 material, and contacting said non-switching and second
5 ovonic materials with electrodes.

1 5. The method of claim 1 including forming said
2 phase change material and said non-switching ovonic
3 material in a pore formed in an insulator.

1 6. The method of claim 1 including forming a second
2 ovonic material in a cup-shape over said phase change
3 material.

1 7. The method of claim 6 including filling said cup-
2 shaped ovonic material with an insulator.

1 8. The method of claim 7 including covering said
2 phase change material with an insulating material.

1 9. The method of claim 8 including positioning said
2 second ovonic material on a portion of said phase change
3 material and covering the rest of said phase change
4 material with nitride.

1 10. The method of claim 1 including forming a cup-
2 shaped first ovonic material and forming said phase change
3 material within said cup-shaped first ovonic material.

1 11. The method of claim 10 including providing a
2 second ovonic material that contacts the upper side of said
3 phase change material.

1 12. The method of claim 12 including covering a
2 portion of said phase change material with an insulator and

3 causing said second ovonic material to contact only a
4 portion of said first phase change material.

1 13. The method of claim 10 wherein said non-switching
2 ovonic material is a stable structural phase.

1 14. A memory comprising:
2 a non-switching ovonic material; and
3 a phase change material that changes between more
4 conductive and less conductive states coupled to said non-
5 switching ovonic material.

1 15. The memory of claim 14 including a second ovonic
2 material over said phase change material.

1 16. The memory of claim 14 including an electrode
2 contacting said non-switching ovonic material.

1 17. The memory of claim 15 including a first
2 electrode contacting said non-switching ovonic material and
3 a second electrode contacting said second ovonic material,
4 said phase change material sandwiched between said non-
5 switching ovonic material, said second ovonic material, and
6 said first and second electrodes, and said phase change
7 material being sandwiched by said first and second
8 electrodes.

1 18. The memory of claim 14 including a substrate
2 under said first ovonic material.

1 19. The memory of claim 14 wherein said non-switching
2 ovonic material is cup-shaped.

1 20. The memory of claim 19 wherein said phase change
2 material is in said cup-shaped non-switching ovonic
3 material.

1 21. The memory of claim 14 including a second ovonic
2 material over said phase change material, said second
3 ovonic material being cup-shaped.

1 22. The memory of claim 21 including an insulator in
2 said cup-shaped second ovonic material.

1 23. The memory of claim 21 wherein said second ovonic
2 material is in contact with said phase change material
3 along a portion of the phase change material and the
4 remaining portion of said phase change material is covered
5 by an insulator.

1 24. The memory of claim 14 wherein said non-switching
2 ovonic material is a chalcogenide.

1 25. The memory of claim 25 wherein said phase change
2 material is a chalcogenide.

1 26. The memory of claim 14 wherein said non-switching
2 ovonic material and said phase change material are formed
3 of a chalcogenide.

1 27. A system comprising:
2 a processor-based device;
3 a wireless interface coupled to said processor-
4 based device; and
5 a semiconductor memory coupled to said device,
6 said memory including a non-switching ovonic material and a
7 phase change material that changes between more conductive
8 and less conductive states over said non-switching ovonic
9 material.

1 28. The system of claim 27 wherein said wireless
2 interface includes a dipole antenna.

1 29. The system of claim 27 wherein said non-switching
2 ovonic material and said phase change material are both
3 formed of a chalcogenide.

1 30. The system of claim 27 including a second ovonic
2 material over said phase change material.